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newsline
volume 5, number 1, january 1984

Changing role for Research Council predicted by Dr. Green

Some change in the role of the Research Council as the provincial government defines its economic strategy over the next few months is predicted by Dr. Robert Green, Deputy President.

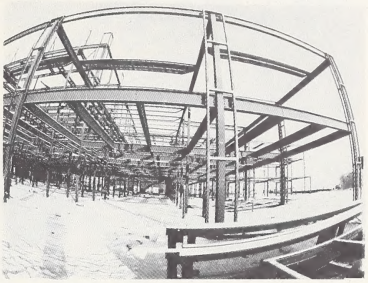
Dr. Green told the annual staff meeting in December "if one reads the thinking properly, the government has an intention of using the Research Council much more significantly ... there will certainly have to be much more awareness on the part of the Research Council of the potential applications of the research it is doing."

A change in priorities coupled with restraint measures for 1984 as advocated by the provincial government will mean internal reallocation of staff and, where necessary, a reduction in force, Dr. Green said.

"It is not possible for everyone to be moved to new areas. We are trying to minimize the impact of these changes, but some of it is inevitably going to be painful," he said. "If there are to be staff layoffs, we will let you know as soon as possible."

Senior management has reviewed Research Council projects and identified biotechnology, advanced technologies, and hydrocarbon upgrading as the areas for new research emphasis.

Among the achievements during 1983, Dr. Green noted the start of construction of the main building at Millwoods, the progress on the coal research centre at Devon, the temporary coal research facility at Nisku now fully operational, and the adoption of a new visual identity. A significant step was the invitation to companies in the high technology area to engage in joint research ventures, which brought an overwhelming response, with one contract signed and another about to be signed.



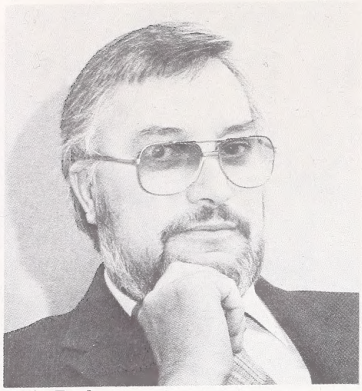
Taking shape at Millwoods - the main building framework

Dr. John Douglas, Vice-President of the Energy Resources Division, gave a slide presentation outlining the Research Council's concept of a strategic vision of advanced technology.

A review of construction progress at Millwoods and Devon was outlined by Victor Jackson, Facilities Consultant, who said the Millwoods first phase contract is $15 million under the originally approved total of $77 million, including land costs.

The work on the Devon coal research centre is nearly finished and Mr. Jackson said the coal analytical staff will move from the Campus Building after March. Depending on the outfitting of the pilot plant, the Biotechnology staff will be moving from Campus to Millwoods in June or July. The major move of staff from Parsons, Terrace Plaza and the remainder from Campus sites will not take place until 1985. But Mr. Jackson said the Natural Resources Division, Graphics Services and Editing (except Sales) will remain at Terrace Plaza, occupying about two and a half floors.

ALBERTA RESEARCH COUNCIL



Colin Ford

Appointment announced

Colin Ford has been appointed Facilities Manager in charge of all the physical facilities used by the Research Council. He also is responsible for accommodations of staff, arranging for equipping labs, interface with Alberta Public Works, Supply and Services on new projects, maintenance, leasing and the physical safety of buildings. Colin joined the Research Council in 1982 as Facilities Officer.

Research Council chemists in speakers exchange

Dr. Michael Kessick, Chemistry Department, is this year's organizer of the Western Speakers Exchange in Chemistry, and along with Dr. Peter Tremaine, will be representing the Research Council.

Peter visited Saskatchewan and Manitoba this fall to speak on "Thermodynamic Data for Hydrothermal Systems by Solution Calorimetry." Mike will visit Regina, Calgary and the University of Alberta early in the new year.

The Research Council has been participating in the exchange program for the past two years in which chemists from research laboratories in western Canada visit other participating laboratories to present overviews of their work and to develop contacts. Other participants are the Universities of Manitoba, Saskatchewan, Regina, Alberta and Calgary, and Atomic Energy of Canada (Whiteshell).

Career goals for women will be topic

Steps to a Scientific Career is the theme for a three-day conference for women in the fields of science, engineering and technology to be held May 11, 12 and 13 at the University of Alberta.

The conference is being sponsored jointly by WISEST, a University of Alberta Task Force on Women in Scholarship, Engineering and Science, and UAYS, the University of Alberta Women in Science and Engineering.

The long-term goal of WISEST is to increase the percentage of women in leading roles in the sciences, engineering and technology, and one of the steps toward this goal is the convening of the conference. Its purpose is to bring together women in these fields in the province of Alberta, thus providing information, encouragement and stimulation both to students beginning to set their goals, and to those who have achieved them. Organizers plan to invite girls from secondary schools in the province who are interested in careers in science, engineering and technology.

Among the speakers at the conference will be the Hon. Judy Erola, Minister Responsible for the Status of Women; Anna Harrison, president of the American Association for the Advancement of Science and past president of the American Chemical Society; Janet Ferguson, Science Council of Canada; and Rose Sheinin, professor of microbiology, University of Toronto.

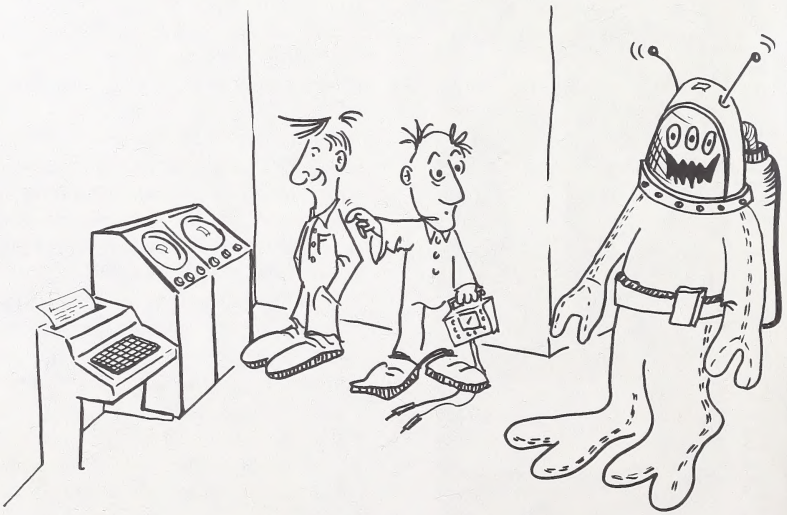
Space flight a turn on in Penhold

The Atmospheric Sciences Department (ASD) played a small, unique role in the recent space shuttle mission, at the request of the national Atmospheric Environment Service.

As the shuttle passed directly over Penhold during its December 6 orbit, the ASD S-band radar was turned on to record local weather from ground level, while the shuttle's radar was mapping from space.

The processed data will be forwarded to AES in Toronto which will be sending it to the University of Wisconsin for comparison with the shuttle's data.

It was the first time ASD's radar was turned on in the winter.



Hey, I wonder what the Space Shuttle crew thought of our 'Welcome to Earth' message...

Dr. Harry Habgood retiring from 30-year career

Dr. Harry W. Habgood joined the Research Council in 1954. For several years he was chief of the Physical Sciences Branch (formerly Fuels Branch). Since 1979 he has been Senior Advisor with responsibility for liaison with universities and other institutions.

After 30 years as a respected scientist and administrator, Dr. Harry Habgood is about to close the door on a distinguished career.

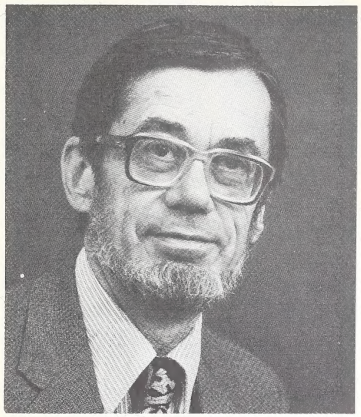
Dr. Habgood's major field of endeavor during his research days has been in various areas of gas separation and, because of the work he instigated, the Research Council was in the forefront of permeation technology for three to four years.

His first project, for which he received a patent, was developing a process for removing nitrogen from natural gas using newly discovered synthetic zeolites. He then moved on to what he terms "a very satisfying and productive period," working in collaboration with Professor Walter Harris of the University of Alberta Chemistry Department.

Dr. Habgood and Dr. Harris were pioneers in the development of the theory of programmed temperature gas chromatography, the basis for techniques in gas separation universally used today.

The two scientists wrote a book on the subject, published in 1965, and while Dr. Habgood regards this work as a worthwhile contribution to the techniques in the broad sense, he questions whether the Research Council today would consider putting such emphasis on fundamental research.

"In those days I was given tremendous freedom because the Research Council basically said do good research. In recent years the Research Council has developed a clearer idea of what its role is, leaning more toward applied research which will have a direct benefit to the province



Dr. Harry Habgood

as opposed to the fundamental research contributing to a general pool of scientific knowledge."

Dr. Habgood's interest in zeolites led him to study them as catalysts and this work he sometimes combined with gas chromatography. In the late 1960s he began another decade-long study with Dr. C.Y. Pan, on the Alberta Helium Project. Again, Dr. Habgood says he was fortunate in combining a senior administrative position with his work as a research scientist.

Some of his colleagues who worked on these various projects believe they were equally fortunate in having Dr. Habgood as a supervisor and co-worker. John Mendiuk of the Coal Research Department describes Dr. Habgood as "an excellent scientist able to communicate with the technologists," and Martin Schurek in the Chemistry Department called him "demanding, but fair, and one of the most progressive, willing to accept change from a scientific point of view. He has an inquiring mind and you could always go to him when you were boxed in and he would lead you out of your maze."

Dr. Habgood says the main aspect of a good scientist is being able to pose the right question, then figuring out the answer.

"To varying degrees, research is just the special skills you have developed that no one else has."

Dr. Habgood graduated from Queen's University as a chemical engineer before obtaining his Ph.D. in physical chemistry from the University of Michigan.

In the intervening years between university studies he worked for two years as an engineer for Naugatuck Chemicals, a subsidiary of Uniroyal, in Elmira, Ontario.

"The greatest triumph there, although it is a little embarrassing to contemplate today, was in helping to make the first commercial DDT," he says. "But at the time we thought this was a boon to mankind."

Four years ago Dr. Habgood traded his lab bench for an executive desk when Dr. Gilles Cloutier, President of the Research Council, asked him to take on the job as Senior Advisor and act as liaison between the Research Council and Alberta's universities.

"Closer cooperation with the universities was very important to Dr. Cloutier and it has been very satisfying to see staff responding to the encouragement to foster new relationships in this area," he says.

As he contemplates retirement, still busily writing final reports in this capacity, Dr. Habgood pauses to observe that the young people on the Research Council staff should be encouraged to develop their own ideas.

"The young scientists should not be afraid to present their ideas and they should develop the skill in how to present them. One has to be in management to get an appreciation for how important new ideas are. Too often, for lack of a persuasive presentation, those who have the ideas have a tendency to be discouraged and go into a sulk. That's unhealthy and unfortunate for the Research Council."

As for the world at large, Dr. Habgood says "no one can claim to be educated unless they know something about science — it's an essential part of a good education."

Operation Kick It

It's January. You want to stop smoking but after the holidays you can't take more "cold turkey."

Then why not join O.K.I. — Operation Kick It. The Occupational Health Unit is organizing an eight-session program spread over two months for those who want to quit smoking. Starting date is January 23.

Operation Kick It works on the principle that every smoker has the inner strength and resources to stop smoking — if he or she really wants to, and on the theory that group support will provide encouragement during a systematic attack against the habit.

For more information about O.K.I., call Jan Logan or Stephanie Wilson at 438-1666.

Annual Christmas party a success

The annual Christmas party was a great success, especially for the winners of the three door prizes.

The Wardair half price fare for two to Hawaii was won by Sandra Barnett; the weekend for two at Calgary's Westin Hotel was won by Mark Johnson, and Milton Zaiffdeen won the dinner for two at Walden's Restaurant.

Sharon Armstrong, Emlyn Koster, Sandra Barnett, Joan Checholik, Rene Erb, John Mendiuk, Kathy Pongar, Kathy Skogg, Laura Swenson, Laura Williams, and Graphic Services, Editing and Public Relations deserve a round of applause for their assistance in organizing the event.

CBC Journal crew visits Penhold

The research aircraft used by the Atmospheric Sciences Department's research may be a "star performer" in an episode of CBC's national affairs program, The Journal.

A CBC Journal TV crew spent a day in Penhold and flew in the aircraft to film footage of the aircraft at work in December. The program, expected to be aired about mid-January, will be a feature on the so-called "greenhouse effect" from increasing amounts of carbon dioxide in the atmosphere and its possible ramifications on the world's climate.

While Research Council studies are not being done in this particular area, the CBC was interested in the work of the research aircraft related to weather modification studies.

New Faces

We welcome the following people who have joined the Research Council: Dr. Peter Clark, Organic Chemist, Coal Research Department; Sharon Steele, Research Technologist, Coal Research Department.

Camera Club workshops

The Camera Club is planning two workshops: a lighting workshop on taking black and white photos scheduled for January 24, and a printing workshop February 28.

Both sessions will be held in the main conference room, Campus building at 7 p.m. for Camera Club members. Anyone interested in joining the club is encouraged to call Tim Southern, chairman, 439-5916, ext. 306, or Cathy Sampson, publicity, 439-5916, ext. 312.

A combined skating party and outdoor winter photography session is being planned for sometime in January or February.

Terrace issues challenge

Terrace Plaza has issued a challenge to the hockey players from Clover Bar and Campus who make up the team playing in the University of Alberta intermural league. Could it be those Terrace types have been checking the scoreboard?

Ross Chow reports the team's standing was one win, two losses and a tie. The team has accepted the Terrace challenge.

Next holiday is April 20.

Newsline is a publication of the Alberta Research Council. Please send all submissions and direct all questions regarding Newsline to:

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Dr. Robert W. Stewart appointed President

Robert W. Stewart, OC, Ph. D., F.R.S., F.R.S.C., has been named President of the Alberta Research Council.

The announcement of Dr. Stewart's appointment was made following Provincial Cabinet approval January 27. He is expected to take up his duties February 13.

For the past four years Dr. Stewart was Deputy Minister for the Province of British Columbia's Ministry of Universities, Science and Communications.

He is an internationally renowned scientist who was invested as an Officer of the Order of Canada in 1980 and is a fellow of both the Royal Society of Canada and Royal Society of London.

For 11 years Dr. Stewart served the Canadian Defence Research Board, then from 1961 to 1970 he was professor of physics and oceanography at the University of British Columbia. In 1970, he left the university to set up the federal Institute of Ocean Sciences at Patricia Bay, B.C., serving as the institute's Director General from 1974 to 1979.

He was involved in the establishment of the Global Atmospheric Research Program (GARP), sponsored by the World Meteorological Organization, a program of supporting research to develop the physical and mathematical basis of long-range prediction and to study the basis of climate. He served on the Program's Joint Organizing Committee from 1968 to 1979, acting as Vice-Chairman from 1968 to 1972, and Chairman from 1972 to 1976.

From 1976 to 1979, Dr. Stewart was President of the International Association for the Physical Sciences of the Ocean. He also is a member of the Sea Use Council, the International Council of Science Union, and

Dr. Robert W. Stewart

is a councillor of the American Meteorological Society.

In 1973, Dr. Stewart received the Patterson Medal awarded by the Canadian Meteorological Society, and in 1976 he was awarded the Sverdrup Gold Medal by the American Meteorological Society in consultation with the Scripps Institution of Oceanography at La Jolla, Calif., and the University of Bergen, Norway, for outstanding leadership and service to his field.

Dr. Stewart was born in Smoky Lake, Alberta. He holds B.Sc. and M.Sc. degrees from Queen's University and was awarded a Ph.D. from the University of Cambridge in 1952, where he served as Commonwealth Visiting Professor in 1968. He also served as Visiting Professor to Dalhousie University and Harvard University and Distinguished Visiting Professor to Pennsylvania State University.

Dr. Stewart holds honorary degrees from McGill University and Dalhousie University.

ALBERTA RESEARCH COUNCIL

Staff response to accidents draws praise

Accidents can and do happen. Prevention obviously is preferable, but when an accident does occur, its severity may depend on the actions of individuals present at the time.

Three incidents at Research Council work sites within three weeks are each a case in point.

At Nisku, a rupture in a pipe within one of the high pressure containment cells caused an explosion and fire. A Research Council volunteer emergency squad — John Mendiuk, Art Kloc and Stephen Marsden — immediately swung into action. They were on the scene and other employees cleared from the building within one minute.

At Parson's a machine shop employee, Dave McAlpine, sustained an arm injury when a grinding wheel exploded. Again, fellow employees Mike Danysh and Craig Korth reacted promptly in giving first aid treatment and in getting the injured man to hospital.

At Clover Bar, project manager Peter Toma came to the rescue. His immediate action prevented high pressure release from a major operating vessel after a small fire started from overheating on a water feed line under high pressure.

The incident at Nisku was due to mechanical failure, which, although unfortunate, will assist the Research Council in reviewing how it deals with high pressure and high temperature experiments, says William Cherpeta, Vice-President of Finance and Administration. The accidents at Parson's and Clover Bar are still under investigation to determine if they could have been avoided.

"The Research Council has a safety policy, prepared in collaboration with division and department heads, approved by senior management and the Board of Directors — it is not a figment of the imagination," Mr. Cherpeta said.

"Our corporate safety policy, outlined in the policy manual, was prepared as a support and implementation of the statutes under the Alberta Occupational Health and Safety Act and the various relevant federal, provincial and municipal acts and regulations."

The Research Council has trained emergency crews at Nisku, Clover Bar and Campus sites who have taken the Industrial Firefighter's courses at the Vermilion Fire Training School. In this photo some of the 18 employees who have taken part in this training program are pictured during one of their exercises.

Mr. Cherpeta said the safety policy defines and outlines responsibilities and requirements in the workplace, and in addition, the Research Council has a safety organization which includes emergency teams, supported with first aid and safety courses and fire drills.

He praised the staff for their quick response in the recent incidents.

"The way our safety procedures are structured and implemented is only one element to safety," he said. "Ultimately it is individuals who make them work. The three recent incidents had the potential for far more serious consequences — the fact that they were not worse is due in large measure to the way people at the scene reacted."

Tectonics group workshop

The third annual workshop of the Canadian Tectonics Group, an organization for structural geologists, attracted 32 people to a series of seminars, lectures and a field trip in October.

The three-day meeting in Jasper was organized by Dr. Willem Langenberg of the Geological Survey Department of the Research Council, and Henry Charlesworth of the University of Alberta geology department. The Geological Survey Department also assisted with transportation.

Dr. Habgood's duties: redistribution made

Dr. Duncan Currie, Vice-President, Frontier Sciences Division, will assume interim responsibility for university liaison on the retirement of Dr. Harry Habgood.

In redistribution of Dr. Habgood's other responsibilities, Patents have been assigned to Dr. David Mitchell, Vice-President, Industrial and Engineering Division and John Holub, Head, Industrial Development Department.

Management co-chairmanship of the Research Council and Professional Staff Association Joint Committee will be assumed by Dr. Ken Babcock, Vice-President, Natural Resources Division.

Contact with the Alberta Department of Federal and Intergovernmental Affairs has been assigned to Mrs. Dorothy Hollands, Corporate Secretary and Director of Public Relations.

The Chairmanship of the Research Fellow Selection Committee will be reallocated when the selection and approval process has been reviewed.

Research Council and INTERA sign agreement for high-tech project

The Alberta Research Council and INTERA Environmental Consultants Ltd., Calgary, have signed a joint research agreement to further develop advanced radar technology which could benefit Arctic oil drilling operations and other marine surveillance activities.

The $1.2 million 32-month project will develop and field test a prototype of INTERA's conceptual design for the Multi-Task Ice Data Analysis System (MIDAS), a computerized radar data processing system.

INTERA already has developed the first SAR (synthetic aperture radar) for commercial use, called the Sea-Ice and Terrain Assessment Radar (STAR-1). The STAR system is considered the most efficient airborne radar service in the world, featuring real-time digital processing combined with an all-weather capability. INTERA will install the STAR-1 in a turbo-prop aircraft and fly over Arctic waters to map sea ice conditions, gathering more than two billion bits of data in five hours flying time.

MIDAS will be expected to process this data, providing an overview image of the sea ice below in real time, and provide final analysis towards development of a numerical ice-dynamics model within four to eight hours after the flight.

In the future, SARs will be installed in satellites and a modified MIDAS could provide an inexpensive system to process the satellite radar data.

In addition to offshore drilling support and marine surveillance, the STAR system can be used for terrain mapping, oil spill tracking, a data source for sea ice forecast models, and for oceanographic applications such as ocean currents, internal wave detection and shallow water anomalies, and the MIDAS system would perform the data processing function to provide the real-time images of areas under surveillance.

What looks like a photograph by a camera is really an airborne radar image recorded by the STAR-1 of sea ice in the Beaufort Sea.

"The Research Council has the expertise as well as the joint funding to make the MIDAS project possible," says Dr. Robert Green, Deputy President of the Research Council, "I consider it a good example of the active ways we are stimulating industrial development in Alberta."

Mr. Brian Bullock, President of INTERA Environmental Consultants Ltd. says: "We are developing new technology for use in Canada's frontiers of the north. Our company, our province and Canada can gain from this project. Our company can provide hardware and software engineering, experience in interpreting ice-surveillance data and experience in modelling and forecasting ice movement. With the Alberta Research Council, we will have a complete team and I am very confident about the outcome of this project."

This joint research agreement is the second to be signed in response to an announcement in January 1983 of the Alberta Research Council's interest in pursuing joint research agreements with Alberta industry in high technology research of interest to individual firms.

Leslie Black has been appointed Coordinator of the Research Council's Coal Technology Information Centre, Campus Building, responsible for supervising activities of the Centre and responding to inquiries on technical matters. The Centre serves not only Research Council staff, but handles a large volume of requests from industry, provincial and federal government departments and agencies, and students. Leslie joined the Research Council in 1981 as an information clerk and was subsequently promoted to information specialist. She holds a B.A. from the University of Western Ontario and an M.A. from the University of Victoria.

Colleagues of Dr. Harry Habgood got together at the Campus Building for a wine and cheese party to wish him and Mrs. Habgood a fond farewell on his retirement from the Research Council. In this photo Dr. Habgood exchanges some views on his 30-year career with Dr. Nancy Cyr, Chemistry Department, and Bob Moore, Director of Financial Services. Dr. and Mrs. Habgood plan to move to Nova Scotia this spring.

Illegal parking — beware

Visitor parking at the Campus building is for visitors to that building ONLY, says Colin Ford, Facilities Manager, and anyone with business in the Campus building must sign in at the desk. The visitors' parking space is not for relatives of Research Council staff who are attending classes at the university.

Colin wishes all staff to be aware that our new facilities officer, Walter Chernecki, has authorization from the City of Edmonton to issue tickets and will be doing so for illegal parking.

Brochure wins merit award

The Alberta Research Council received an award of merit for the Geological Survey brochure, the winning entry in a competition sponsored by the Edmonton Chapter of the International Association of Business Communicators.

The brochure was one of 24 entries in the print projects, special publications category, and one of three selected for awards.

Dr. Gordon Bird gives talk to science writers

Dr. Gordon Bird, Oil Sands Research Department, was one of the speakers at a one-day symposium for science writers held in Ottawa, and he was extensively quoted in an article in the Ottawa Citizen.

Topic of Dr. Bird's presentation was "Nuclear Waste Disposal — the Issues and Technological Challenge."

The symposium was organized by the Canadian Science Writers Association which invited 14 earth scientists to discuss such topics as The Law of the Sea, Petroleum Exploration in the High Arctic, Hydrothermal Mineral Deposits on the Sea Floor, Deep Seismic Sounding for Petroleum Exploration, Digital Mapping and Nuclear Waste Disposal.

Photo lecture series to begin February 27

Anyone who uses a camera has experienced the disappointment of bad lighting, fuzzy exposures and a host of other imperfections.

Now is your chance to learn how to take better photos. Starting February 27, our resident expert, Leslie Lorinczi, will give a series of lectures and practical demonstrations on the use of the common camera, types of films, and types of photography such as illustrative, industrial, art, science and "Sunday photography."

Approximately six lectures will take place each Monday from 4:30 to 6:00 p.m. in the sixth floor conference room at Terrace Plaza. There is no fee, but participants may be expected to provide film for demonstration purposes.

Those interested should call Mika Madunicky, 438-0555 ext. 275 before February 20.

New faces

We wish to welcome to the Research Council Lorne Duncan, Computing Technologist in the Atmospheric Sciences Department.

The next holidays are April 20 and 23.

Newsline is a publication of the Alberta Research Council. Please send all submissions and direct all questions regarding Newsline to:

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